Supporting Information

Disruption of zeta-carotene desaturase protein ALE1 leads to chloroplast developmental defects and seedling lethality

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Table S1 Primers used for gene mapping and qRT-PCR

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Primers	Forward	Reverse
ap1	CTCGTGTTGATAACGTGTTG	AGGGCTTGAGATGTTAGTTG
ap2	ATCACGGCGGTTACTACTTA	AACTGCATGCACAAATATGA
ap3	AACGTGAAGAACTTGCATCT	TTCTCTTGACCCAGGAAGTA
ap4	CTAACCATCAGCTTTTGCTC	AAATGGTGTAATTGGATTGC
ap5	TCTTATCTCGTAGAGGCATTTT	AAGGGTAGCAACCAAACATA
ap6	TCTGCTCCAAGTTTCTCTGT	GAGAGTGGTAGTGAGGCTTG
ap7	AAGACGAGCCAAGAAGAGA	CCAAATTAACCTTGTCATCG
ap8	TTCTTAGTGAGGCAACATCC	TCAATCCTAGAAGGTACGTGA
ap9	TCCGGATTGTTGGTACTAGA	ATTGTGTCTTGGAGTCCGTA
ap10	AAGCAAACCCAAGTAAGACA	TGGATTGAGGATCAGGATAG
OsActin1	CCCTCCTGAAAGGAAGTACAGTGT	ACTCGTCGTACTCAGCCTTGG
ALE1	GCTCTTGCTCTAAGCCCAGTT	CCAAGAGCATAGGCAACAGGA
HEMA1	CGCTATTTCTGATGCTATGGGT	TCTTGGGTGATGATTGTTTGG
CAO	GATCCATACCCGATCGACAT	CGAGAGACATCCGGTAGAGC
PORB	CCGCAAGGAGGGAGCGGTG	CCCTCTTGGTGCTAAGGCCG
CHLH	AACTGGATGAGCCAGAAGAGA	AAATGCAAAAGACTTGCGACT
OsDVR	AGCCCAGGTTCATCAAGGT	TGATCACCCTCTCGAAGAACT
NOL	CCACGAAAGGTATAGGATATG	TCAAGTCAGTCACCGCAGAT
NYC1	TTTTGAGCGGTTCTTCTCTGA	CCTTTCACAACTCGCATCCT
NYC4	CGTCTATGACCAACTCATGG	TGCGTCAGCTCTGTATTGCT
PAO	AAGCCTCCGATGTTACCGAA	CGAGGGTTTCCAGAATTTGA
RCCRI	GGATCGACGATTGATTTCATG	GTCGAGGCGTTCAGAAAGAT
Lhcb1	CCATGTTCTCCATGTTCGGCTTCT	TAGGCCCAGGCGTTGTTGTTGA
Lhcb4	TACCTGCAGTTCGAGCTGGAC	AGGCCGAACACCTCGGTGTA
lcyB	CCAAGGCCTCCAACACGTC	CTCTGTCCTGGATGAGGTTGC
lcyE	GGCTGGCTTTGATAATCCAAC	CGTCGAACCAAGGAATCCTC
PDS	TCGATGGAGGGTGCAGTTCTA	TCAGACTGCAGACTTTTCAGGC
VDE	CCTCATGGAGGTGAAACAGGA	TGCTTCCATGTTCATCTGATCC
PSY1	TACTCCGTGACGTTGGAGAGG	TGTCCTCATCAGAGAGCCCTG
PSY2	CTTTGATGAGGCGGAGAAGG	GATAGCATCAAGGATCTGCCG
rtISO	CATGTGTGCTCATCGAGTTGC	AGCAAGCGTTCTCAACCATCT
Z-ISO	GTGGGAAACTGGAATAATGCG	TCCATAACGTGTGGGCTAAGC